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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,147	04/02/2004	Philippe Coronel	859063.560	1182

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EXAMINER	
ROSE, KIESHA L	

ART UNIT	PAPER NUMBER
2822	

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/817,147	CORONEL ET AL.	
	Examiner	Art Unit	
	Kiesha L. Rose	2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) *4-8* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 9-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/20/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to the election filed 31 October 2005.

Election/Restrictions

Claims 4-8 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected method of making a semiconductor device, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 31 October 2005.

Applicant's election without traverse of claims 1-3 and 9-24 in the reply filed on 31 October 2005 is acknowledged.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 discloses the silicon surfaces of the active surfaces opposite to the conductive strips and the conductive regions are covered with an insulator forming a gate oxide. It is unclear what or where the silicon surfaces are located in the transistor.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,3 and 9-11, as far as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Schulz et al. (DE 19928564).

Schulz discloses a MOSFET (Fig. 1) that contains a silicon substrate (1), an active area surrounded by an insulating wall (12), a first conductive strip (10c) covering a central strip of the active area, a second conductive strip (10a/10b) placed in the active area right below the first conductive strip and conductive regions (2a/2b) placed in two recesses of the insulating wall and placed against ends of the first and second conductive strips and an insulator (9) forming a gate oxide.

The conductive regions are placed against the first and second strips separately. (claim 3, Fig. 1)

The second strip is one of a plurality of second conductive strips and together with the first conductive strips is forming a stack and the number of second conductive strips is 1 or 2 (claims 9-10, fig. 1)

The conductive strip is separated by a silicon layer (4a/6a) (claim 11, abstract)

Claims 12,17-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Schulz et al. (DE 19928564).

Schulz discloses a MOSFET (Fig. 1) that contains a silicon substrate (1), an active area surrounded by an insulating wall (12), a first conductive strip (10c) covering a central strip of the active area, a first insulating layer (9) immediately below first conductive strip, a second conductive strip (10a/10b) placed in the active area right below the first conductive strip and conductive regions (2a/2b) placed in two recesses of the insulating wall and placed against ends of the first and second conductive strips and a second insulator (9) forming a gate oxide. (claims 12 and 20)

The second strip is one of a plurality of second conductive strips and together with the first conductive strips is forming a stack and the number of second conductive strips is 1 or 2 (claims 17 and 18, fig. 1)

The conductive strip is separated by a silicon layer (4a/6a) (claims 16,19 and 21, abstract)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2,13-15 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz in view of Krivokapic et al. (U.S. Patent 6,396,108).

Schulz discloses all the limitations except for the conductive strips to be polysilicon. Krivokapic discloses a double gate (Fig. 9b) that contains conductive strip

(122) and conductive regions (140) that are formed of polysilicon. The conductive strips and conductive regions are formed of polysilicon because polysilicon is a good conductor for MOS transistors. (Column 4, lines 40-41) Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Schulz by incorporating the conductive strips and regions to be made of polysilicon or aluminum since they are good conductors for MOS transistors as taught by Krivokapic.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Krivokapic et al. discloses a double gate MOS transistor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiesha L. Rose whose telephone number is 571-272-1844. The examiner can normally be reached on T-F 8:30-6:00 off Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on 571-272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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KLR

ZANDRA V. SMITH
SUPERVISORY PATENT EXAMINER
20 Jan. 2006